

# MEDICAL POLICY



MEDICAL POLICY DETAILS	
Medical Policy Title	RADIOFREQUENCY JOINT ABLATION/DENERVATION
Policy Number	7.01.42
Category	Technology Assessment
Effective Date	10/18/01
Revised Date	10/18/01, 07/18/02, 06/19/03, 03/18/04, 02/15/07, 01/17/08, 01/15/09, 01/21/10, 01/20/11, 01/19/12, 01/17/13, 01/16/14, 12/18/14, 12/17/15, 11/17/16, 11/16/17, 06/21/18, 12/20/18, 06/20/19
Archived Date	(ARCHIVED: 01/20/05-02/15/07)
Product Disclaimer	<ul style="list-style-type: none"> <li>• If a product excludes coverage for a service, it is not covered, and medical policy criteria do not apply.</li> <li>• If a commercial product (including an Essential Plan product) or a Medicaid product covers a specific service, medical policy criteria apply to the benefit.</li> <li>• If a Medicare product covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.</li> </ul>

## POLICY STATEMENT

- I. Based upon our criteria and assessment of the peer-reviewed literature, radiofrequency joint denervation/ablation has been medically proven to be effective and therefore, **medically necessary** for facet mediated pain resulting from disease, injury, or surgery when ALL of the following indications are met:
  - A. Clinical findings and imaging studies suggest no other obvious cause of the pain (e.g., central spinal stenosis with neurogenic claudication/myelopathy, foraminal stenosis or disc herniation with concordant radicular pain/radiculopathy, infection, tumor, fracture, pseudoarthrosis, pain related to spinal instrumentation);
  - B. Failure of at least three (3) months of conservative therapy (e.g., exercise, physical methods including physical therapy, chiropractic care, Nonsteroidal anti-inflammatory drugs [NSAID's] and/or analgesics) unless contraindicated and the reason(s) for the contraindication(s) is/are documented in the medical record.
  - C. Two positive diagnostic facet joint injections/medial branch block using a local anesthetic as evidenced by 80% pain relief for the duration of the local anesthetic used.
- II. Based on our criteria and assessment of the peer-reviewed literature, for an individual with a *prior spinal fusion*, radiofrequency joint denervation/ablation has been medically proven to be effective and therefore **medically necessary** when the procedure is performed at an unfused spinal segment located either above or below the fused spinal segment, and ALL of the above criteria are met (Policy Statement I.A-C.).
- III. Based upon our criteria and assessment of the peer-reviewed literature, a *repeat* radiofrequency joint denervation/ablation has been medically proven to be effective and therefore, medically necessary when BOTH of the following criteria are met:
  - A. There is documented pain relief of at least 50% which has lasted for a minimum of 12 weeks;
  - B. The procedure is performed at a minimum of six months following the prior denervation/ablation procedure.
- IV. Based upon the literature and/or available information, radiofrequency joint denervation/ablation is **not medically necessary** for ANY of the following:
  - A. When performed without the use of fluoroscopic guidance;
  - B. Performing more than two procedures at the same level(s) during a 12 month period of time;
  - C. In the absence of two sequential positive diagnostic facet joint injections/medial branch blocks at the same level(s) for an initial radiofrequency treatment, or for a repeat radiofrequency treatment in the absence of at least 50% relief of facet mediated pain for at least 6 months from a previous radiofrequency treatment at the same level(s);
  - D. When performed for neck pain or low back pain in the presence of an untreated radiculopathy;
  - E. When performed at a posteriorly fused spinal motion segment;
  - F. When performed on more than three levels during the same session/procedure;

## **Medical Policy: RADIOFREQUENCY JOINT ABLATION/DENERVATION**

**Policy Number: 7.01.42**

**Page: 2 of 5**

- G. When performed to treat pain arising from above C2-C3 and below L5-S1 spinal levels.
- V. Based upon our criteria and the lack of peer-reviewed literature, these methods of ablation have not been medically proven to be effective and are considered **investigational** for all of the following:
  - A. Pulsed radiofrequency ablation for chronic pain syndromes;
  - B. Endoscopic radiofrequency denervation/endoscopic dorsal ramus rhizotomy;
  - C. Cryoablation/cryoneurolysis/cryodenervation;
  - D. Chemical ablation (e.g., alcohol, phenol, glycerol);
  - E. Laser ablation;
  - F. Ablation by any method for sacroiliac (SI) joint pain; and
  - G. Cooled radiofrequency ablation.

*Refer to Corporate Medical Policy #11.01.03 regarding Experimental and Investigational Services.*

*Refer to Corporate Medical Policy #7.01.87 regarding Spinal Injections (Epidural and Facet Injections) for Pain Management.*

### **POLICY GUIDELINES**

- I. When performing radiofrequency joint denervations/ablations, it may be necessary to perform the procedure at the same level(s) bilaterally; however, no more than three (3) levels should be performed during the same session/procedure.
- II. When performing a repeat radiofrequency joint denervation/ablation at the same spinal level(s) as a prior successful denervation/ablation procedure, further diagnostic facet joint injections/medial branch blocks at that spinal level(s) are not necessary.
- III. The Federal Employee Health Benefit Program (FEHBP/FEP) requires that procedures, devices or laboratory tests approved by the U.S. Food and Drug Administration (FDA) may not be considered investigational and thus these procedures, devices or laboratory tests may be assessed only on the basis of their medical necessity.

### **DESCRIPTION**

The facet joints (zygapophyseal joints) are located at the posterior aspect of the spine and are designed to provide stability and control motion between the vertebrae. These small joints are prone to injury, deterioration, and inflammation. There are a number of proposed causes of facet joint syndrome. The facet joints may be irritated from trauma, repetitive movements, or arthritic changes. It is very common to develop degenerative changes in facet joints after trauma to the spine, as a result of an injury to the intervertebral disc or secondary to degenerative disc disease. If the intervertebral disc is damaged and the cushioning effect of the disc is lost, the facet joints at that level will undergo more stress, which may result in degeneration of the facet joint. Diagnosis of facet joint pain is confirmed by response (pain alleviation) to nerve blocks with a least a 50% improvement on two (2) positive blocks being required.

Percutaneous radiofrequency facet denervation is a low-risk means of treating “mechanical” pain syndromes in previously unoperated patients with back and/or leg pain. Under local anesthesia, needle placement is made under fluoroscopy to the facet (zygapophyseal) joint. The cannula is then redirected until contact with the bone is lost. Following the removal of the guide needle stylet, a thermal monitoring electrode with an exposed tip is passed, and the guide needle pulled back on the electrode beyond the skin. Electrostimulation is then performed and a lesion is made using a radiofrequency lesion generator. Control of the temperature over the nerve roots permits selective denervation of the pain conduction fibers. The nerves regenerate, and repeat procedures are effective though it is not known how many times the procedure can be repeated or if the duration of relief will change.

Pulsed radiofrequency consists of short bursts of electrical current of high voltage in the radio frequency range but without heating the tissue enough to cause coagulation. It is suggested as a possibly safer alternative to thermal radio frequency facet denervation. Temperatures do not exceed 42°C at the probe tip vs. temperatures in the 60s C. reached in thermal radiofrequency denervation, and tissues may cool between pulses. It is postulated that transmission across small unmyelinated nerve fibers is disrupted but not permanently damaged, while large myelinated fibers are not affected.

## Medical Policy: RADIOFREQUENCY JOINT ABLATION/DENERVATION

Policy Number: 7.01.42

Page: 3 of 5

### RATIONALE

Radiofrequency facet denervation as a procedure does not require FDA approval. Several radiofrequency generators and probes have been cleared for marketing through the FDA's 510(k) process.

Peer-reviewed literature reporting small randomized, controlled studies of the efficacy and safety of radiofrequency facet denervation as well as evidence from larger case series is sufficient to permit conclusions that the technology provides significant and sustained relief of pain with minimal side effects in appropriately selected patients.

There is very limited literature on pulsed radiofrequency denervation. The mechanism of its action not completely understood, and published data is insufficient to draw conclusions about its efficacy.

### CODES

- Eligibility for reimbursement is based upon the benefits set forth in the member's subscriber contract.
- **CODES MAY NOT BE COVERED UNDER ALL CIRCUMSTANCES. PLEASE READ THE POLICY AND GUIDELINES STATEMENTS CAREFULLY.**
- Codes may not be all inclusive as the AMA and CMS code updates may occur more frequently than policy updates.

#### CPT Codes

Code	Description
64633	Destruction by neurolytic agent, paravertebral facet joint nerves(s) with imaging guidance (fluoroscopy or CT); cervical or thoracic, single facet joint
64634	cervical or thoracic each additional facet joint
64635	lumbar or sacral, single facet
64636	lumbar or sacral, each additional facet joint

*Copyright © 2019 American Medical Association, Chicago, IL*

#### HCPCS Codes

Code	Description
None	

#### ICD10 Codes

Code	Description
M53.1	Cervicobrachial syndrome
M54.10	Radiculopathy, site unspecified
M54.18	Radiculopathy, sacral and sacrococcygeal region
M54.2	Cervicalgia
M54.30-M54.32	Sciatica (code range)
M54.40-M54.42	Lumbago with sciatica (code range)
M54.5	Low back pain
M54.6	Pain in thoracic spine
M79.2	Neuralgia and neuritis, unspecified

### REFERENCES

Arsanious D, et al. Pulsed dose radiofrequency before ablation of medial branch of the lumbar dorsal ramus for zygapophyseal joint pain reduces post-procedural pain. Pain Physician 2016 Sept-Oct;19(7):477-484.

\*Atluri S, et al. Systematic review of diagnostic utility and therapeutic effectiveness of thoracic facet joint interventions. Pain Physician 2008 Sep-Oct;11(5):611-29.

## Medical Policy: RADIOFREQUENCY JOINT ABLATION/DENERVATION

Policy Number: 7.01.42

Page: 4 of 5

BlueCross BlueShield Association. Facet Joint Denervation. Medical Policy Reference Manual Policy #7.01.116. 2018 Nov 08.

\*Cohen SP, et al. Randomized placebo-controlled study evaluating lateral branch radiofrequency denervation for sacroiliac joint pain. Anesthesiology 2008 Aug;109(2):279-88.

\*Cohen SP, et al. Lumbar zygapophysial (facet) joint radiofrequency denervation success as a function of pain relief during diagnostic medial branch blocks: a multicenter analysis. Spine J 2008 May-Jun;8(3):498-504.

\*Cohen SP, et al. Factors predicting success and failure for cervical facet radiofrequency denervation: a multi-center analysis. Reg Anesth Pain Med 2007 Nov-Dec;32(6):495-503.

\*Cohen SP, et al. Multicenter, randomized, comparative cost-effectiveness study comparing 0, 1, and 2 diagnostic branch (facet joint nerve) block treatment paradigms before lumbar facet radiofrequency denervation. Anesthesiol 2010 Aug;113(2):395-405.

Engel A, et al. The effectiveness and risks of fluoroscopically-guided cervical medial branch thermal radiofrequency neurotomy: a systematic review with comprehensive analysis of the published data. Pain med 2016 April;17(4):658-669.

Filippiadis DK and Kelekis A. A review of percutaneous techniques for low back pain and neuralgia: Current trends in epidural infiltrations, intervertebral disk and facet joint therapies. Br J Radiology 2015 Oct 14 [Epub ahead of print].

\*Haspelslagh SR, et al. Randomised controlled trial of cervical radiofrequency lesions as a treatment for cervicogenic headache. BMC Anesth 2006 Feb 16;6:1.

Juch JNS, et al. Effect of radiofrequency denervation on pain intensity among patients with chronic low back pain: the Mint randomized clinical trials. JAMA 2017 July 4;318(1):68-81.

\*Kroll HR, et al. A randomized, double-blind, prospective study comparing the efficacy of continuous versus pulsed radiofrequency in the treatment of lumbar facet syndrome. J Clin Anesth 2008 Nov;20(7):534-7.

\*Lakemeier S, et al. A comparison of intraarticular lumbar facet joint steroid injections and lumbar facet joint radiofrequency denervation in the treatment of low back pain: a randomized, controlled, double-blind trial. Anesth Analg 2013;117(1):228-35.

Lee CH, et al. The efficacy of conventional radiofrequency denervation in patients with chronic low back pain originating from the facet joints: a meta-analysis of randomized controlled trials. Spine J 2017 May 30. [Epub ahead of print].

\*Levin JH. Prospective, double-blind, randomized placebo-controlled trials in interventional spine: what the highest quality literature tells us. Spine J 2008 Sep 11 [Epub ahead of print].

Maas ET, et al. Radiofrequency denervation for chronic low back pain. Cochrane Database Syst Rev 2015 Oct 23;(10):CD008572.

MacVicar J et al. Appropriate use criteria for fluoroscopically guided diagnostic and therapeutic sacroiliac interventions: results from the spine intervention society convened multispecialty collaborative. Pain Med 2017; 18(11):2081-2095.

Manchikanti L, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. Pain Physician 2015 Jul-Aug;18(4):E535-82.

Manchikanti L, et al. Cervical zygapophysial (facet) joint pain: effectiveness of interventional management strategies. Postgrad Med 2016 Jan;128(1):54-68.

Nagar VR, et al. Systematic review of radiofrequency ablation and pulsed radiofrequency for management of cervicogenic headache. Pain Physician 2015 Mar-Apr;18(2):109-30.

\*Nath S. et al. Percutaneous lumbar zygapophysial (facet) joint neurotomy using radiofrequency current, in the management of low back pain: a randomized double-blind trial. Spine 2008 May 20;33(12):1291-7.

\*Patel N, et al. A randomized, placebo-controlled study to assess the efficacy of lateral branch neurotomy for chronic sacroiliac joint pain. Pain Medicine 2012;13:383-398.

**Medical Policy: RADIOFREQUENCY JOINT ABLATION/DENERVATION**

**Policy Number: 7.01.42**

**Page: 5 of 5**

Poetscher AW, et al. Radiofrequency denervation for facet joint low back pain: a systematic review. Spine 2014 Jun 15;39(14):E842-9.

Van Tilburg CW, et al. randomized sham-controlled double-blind multicenter clinical trial to ascertain the effect of percutaneous radiofrequency treatment for lumbar facet joint pain. Bone Joint J 2016 Nov;98-B(11):1526-1533.

\*Van Wyjk RMAW, et al. Radiofrequency denervation of lumbar facets joints in the treatment of chronic low back pain. A randomized, double-blind, sham lesion-controlled trial. Clin J Pain 2005 Jul/Aug;21(4)335-44.

\*Van Zundert J, et al. Pulsed radiofrequency adjacent to the cervical dorsal root ganglion in chronic cervical radicular pain: a double blind sham controlled randomized clinical trial. Pain 2007 Jan;127(1-2):173-82.

Watters WC 3<sup>rd</sup>, et al. Guideline update for the performance of fusion procedures degenerative disease of the lumbar spine. Part 13: injection therapies, low-back pain and lumbar fusion. J Neurosurg Spine 2014 Jul;21(1):79-90

\*Key Article

**KEY WORDS**

Denervation, Facet, Radiofrequency

**CMS COVERAGE FOR MEDICARE PRODUCT MEMBERS**

There is currently a Local Coverage Determination that addresses Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy (L35936). Please refer to the following LCD web site for Medicare Members:

[https://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=35936&ContrId=298&ver=22&ContrVer=1&CtrctrSelected=298\\*1&Ctrctr=298&name=National+Government+Services%2c+Inc.+\(13201%2c+A+and+B+and+HHH+MAC%2c+J+-+K\)&s=All&DocType=Active&bc=AggAAAQAAAAAAAA%3d%3d&#0](https://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=35936&ContrId=298&ver=22&ContrVer=1&CtrctrSelected=298*1&Ctrctr=298&name=National+Government+Services%2c+Inc.+(13201%2c+A+and+B+and+HHH+MAC%2c+J+-+K)&s=All&DocType=Active&bc=AggAAAQAAAAAAAA%3d%3d&#0)